



## **Rocky Flats Citizens Advisory Board Recommendation 2003-5**

### **Comments and Recommendations on Long-Term Stewardship for the Building 771 Decommissioning Operations Plan, Modification No. 5**

Approved July 10, 2003

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#### **Introduction.**

The Rocky Flats Citizens Advisory Board believes stewardship is an essential component of cleanup decisions at the Rocky Flats Environmental Technology Site. While we understand that enforceable stewardship commitments will be captured in the Corrective Action Memorandum/Record of Decision, we do not think it is wise to leave considerations and analyses of stewardship until cleanup has been achieved. We believe stewardship should be considered when cleanup decisions are made. We also believe that whenever it is cost-effective and worker health and safety are not imperiled, cleanup is preferable to the use of physical and institutional controls.

In order to limit access to property, protect human health, the environment and cultural and natural resources, and prevent or limit inadvertent exposure to residual contaminants and hazards, we recommend the following stewardship activities be conducted by the Site.

1. In accordance with Department of Energy Policy on the Use of Institutional Controls, approved April 9, 2003:
  - a. We recommend institutional controls and other stewardship activities not be used to substitute for permanent solutions when such solutions are reasonably achievable. We recommend permanent solutions be found when they are cost-effective and do not endanger worker health and safety.
  - b. We recommend "layering" of controls, that is, to use multiple, relatively independent layers of safety to protect human health and the environment so that if one control fails, other controls will be in place or actions will be taken to mitigate consequences of the failure.
2. In accordance with U.S. Department of Energy implementation guidelines for DOE policy, we recommend stewardship be considered early in the planning process.
3. In accordance with DOE Long-term Stewardship Planning Guidance for Closure

Sites, dated August 2002, we recommend that long-term stewardship be considered in each decision that impacts DOE cleanup. According to that guidance, this responsibility extends from the identification of remediation alternatives, remedial design, construction, operation, and through all relevant decisions made over the lifetime of the hazards.

4. We recommend lifecycle costs of stewardship be analyzed and compared to the cost of cleanup to free-release criteria or the cost of complete cleanup and ask that comparison be shared with stakeholders and the public.

5. In accordance with DOE policy and guidance, we recommend stakeholders and citizens be consulted on issues of long-term stewardship.

6. With respect to the Decommissioning Operations Plan for Building 771, where plutonium and americium above free-release criteria will remain underground, potential pathways for exposure for these contaminants are migration into groundwater and migration via erosion.

We, therefore, recommend the following long-term stewardship activities be written into the Decommissioning Operations Plan and the life-cycle costs of such stewardship activities be analyzed. We recommend:

a. Institutional Controls:

- (1) A ban on excavation in or around Building 771.
- (2) A ban on construction in or around Building 771.
- (3) A ban on using the groundwater in the area of Building 771.

b. Physical Controls:

- (1) Signs around the perimeter of the building denoting where it is located and warning people away from the area in order to avoid damaging vegetation and leaving the area vulnerable to erosion. Consider methods to identify a common language so future generations can identify the meanings of signs and markers.
- (2) A fence to keep people and wildlife from walking onto the area and potentially damaging vegetative cover and leaving the area vulnerable to erosion.
- (3) A biota barrier to prevent intrusion of burrowing animals.

c. Monitoring and Maintenance:

- (1) A groundwater-monitoring network down gradient but near Building 771 to determine if plutonium or americium from the building are migrating. Because plutonium and americium move slowly in the environment, the monitoring period may be as infrequent as once a year or once every five years.
- (2) Annual monitoring of slope stability to ensure erosion is kept in check.
- (3) Weekly monitoring of vegetation in the area of Building 771 immediately after it is revegetated to insure vegetative cover will protect against erosion.
- (4) Annual monitoring of vegetation after it is established to protect the area against erosion.

d. Periodic Assessment:

- (1) Annual monitoring of institutional and physical controls to verify they continue to work.
- (2) Every five to 10 years, research of technologies that might eliminate remaining residual contamination in a safe and cost-effective manner.
- (3) Evaluation of controls to ensure they provide necessary protection.

e. Information Management: The location and amount of contamination should be captured and stored in a repository. The information repository should include the history of the building, depth of contamination, and where it is located on a geographical information system. Information should also include institutional controls, the location of physical controls, the location of monitoring wells and monitoring data.

f. Public Education: The public should be kept informed of long-term stewardship decisions made post-closure and specifically be informed of monitoring data generated for the Building 771 area.

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The Rocky Flats Citizens Advisory Board is a community advisory group that reviews and provides recommendations on cleanup plans for Rocky Flats, a former nuclear weapons plant outside of Denver, Colorado.

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